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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,101	12/20/2001	Richard Vernon Ford	6533/53662	9681
30505	7590	03/11/2005	EXAMINER	
MARK J. SPOLYAR 38 FOUNTAIN ST. SAN FRANCISCO, CA 94114			CHUNG, JI YONG DAVID	
			ART UNIT	PAPER NUMBER
			2143	
DATE MAILED: 03/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/027,101	FORD, RICHARD VERNON	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ji-Yong D. Chung	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12/20/2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                                 |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/20/2001</u> . | 6) <input type="checkbox"/> Other: _____                                                |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 1-4, 6-7, 11, 12-14, and 16-18** are rejected under 35 U.S.C. 102(e) as being anticipated by Baugher et al (Baugher hereinafter).

With reference to **claims 1**, Baugher shows a method comprising the steps of:

*monitoring the volume of network traffic generated by a plurality of users* [See lines 47-51, column 5 for “Throughput.”];

*detecting a network utilization milestone relative to at least one of the users* [See from line 47, column 7 to line 6, column 8 for accessing MIB, which results in the notification of a process of reaching a THRESHOLD]; and

*affecting a characteristic associated with the network access provided to the users) identified in the detecting step* [See from line 47, column 7 to line 6, column 8. It addresses changing the bandwidth (“characteristic associated with the network access”) at a node, in order to change the service characteristics].

With respect to **claim 2**, Baugher shows:

*affecting a performance characteristic of the network access provided to the user(s) identified in the detecting step* [See from line 47, column 7 to line 6, column 8. Increasing or decreasing the bandwidths as indicated in the passage would affect the performance characteristics of the network access provided].

With respect to **claim 3**, the method of claim 1 wherein the affecting step comprises the step of:

*degrading the network access provided to the users) identified in the detecting step* [Again, see from line 47, column 7 to line 6, column 8. Decreasing the bandwidth is “degrading” network access].

With respect to **claim 4**, the method of claim 1 wherein the affecting step comprises the step of:

*denying further network access to the users) identified in the detecting step* [See lines 25 column 8 to line 36, in which user bandwidths allocation may fail; the user network access would fail and their access would be denied in such instances].

With respect to **claim 6**, *the method of claim 1 further comprising the step of notifying a user when the volume of traffic associated with the user approaches a network utilization milestone* [See lines 63-65, column 8, in which a user is notified when his frame size (which is changed in accordance with QoS) exceeds the maximum\_frame\_size].

With respect to **claim 7**, *Baughner shows the detecting step comprises comparing the volume of traffic associated with a user over a given time interval against a threshold level defining a network utilization milestone.* [Again, see from line 47, column 7 to line 6, column 8 and the discussion of throughput, which is the monitored QoS. See lines 47-52, column 5].

With respect to **claim 11**, all of its limitations have been discussed with respect to claims 1, except that claim 11 cites “a given time interval” and “remainder of the time interval.” However, those limitations are inherent in Baughner. Any measurement performed in Baughner has to be performed over some duration of time. Furthermore, if QoS is changed within the interval (which can be done in accordance with Baughner disclosure), the user service will be affected during the remainder of time interval.

With respect to claims **12-14, 16, and 17**, their limitations already have been discussed with claims **2-4, 6 and 7**, respectively.

**Claim 18** cites a “fixed time interval.” See lines 58-63, column 5 of Baugher for “the sampling period,” which is fixed.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 5, 8-10, 15, 19-24, and 26-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baugher in view of Amin et al, (Pub. No. 2002/0152319, Amin hereinafter). Amin incorporates U. S. Pat. No. 6,714,987, to Amin et al (Amin2 hereinafter) by reference.

With respect to **claim 5**, Baugher does not show but Amin shows the *affecting step comprises the step of charging the users) identified in the detecting step for further network access* [See paragraphs 0177-0198 for changing QoS (e.g., allocating more bandwidth) and see paragraph 0010 for billing the users based on QoS].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Baugher with the above features that Amin shows, because, as stated in paragraphs 0011 of Amin’s disclosure, Amin’s billing “[*edited*] feature is an advantage to the operator and allows for full compensation of network resource use.”

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With respect to claim **8-10**, their limitations have been discussed with respect to claims 3, 4, and 1, respectively, except that claims 8-10's limitations are cited in the context of "*predefined set of traffic types*." However, Amin illustrates predefined traffic types in paragraphs 0152-0154.

With respect to **claims 15 and 20-22**, their limitations have been discussed with respect to claims 5, 8-10, respectively.

**Claim 19** cites a "sliding time interval." Amin meets the limitation. Amin refers to session; see paragraph 0011. The duration of session is not fixed. It can be viewed as "sliding," because of the duration of use constantly increases, and the duration of monitoring would change accordingly.

In reference to **claim 23**, it cites the following limitations that have not yet been discussed with regard to claims 1-22:

*registering a user at a network access device connected to a first computer network, the network access device including an IP address* [See paragraphs 0046-0049 of Amin for Authentication and Authorization (giving network access) to a local. See paragraph 0025 for indication that Amin's system is IP centric; it would use IP address to designate devices];

*associating the IP address with the user* [See paragraph 0054 of Amin for DHCP, which assigns IP address];

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*providing the user access to a second computer network by changing the configuration of a network device in a communication path between the first computer network and the second computer network* [See paragraph 0031 for giving access to applications in the Internet];

In addition, the claim 23 refers to “changing the configuration of the network.” Baugher meets the limitation because Baugher changes bandwidth in response to network measurements, as discussed in claim 1.

**Claim 24** cites an apparatus facilitating the deployment of volume-based network policies across a first computer network, *the first computer network comprising at least one traffic monitoring device operative to monitor the volume of network traffic generated by individual users, and at least one network control device operative to control access to a second computer network, comprising* [The limitations have been discussed with respect to claim 23 and preceding claims]

*a user account database maintaining the respective volumes of network traffic generated by a plurality of users* [See from line 65, column 18 to line 2, column 19, Amin2 The user database for sessions exists locally];

*a data logging module operative to collect network utilization data from the traffic monitoring device and store the network utilization data in the user account database* [the logging module is inherent in Amin2. Session data referred to from line 65, column 18 to line 2, column 19 exists only because the data have been logged];

a network usage monitor operative to:



scan the user account database to detect a network utilization milestone reached by a user based on the volume of network traffic associated with the user [See lines 35-57, column 19, Amin2, for instantiation of service session by user invocation. The instantiation involves scanning the database. Note that the instantiated user account information is then used later for QoS service requirements];

*modify the configuration of the network control device to affect a characteristic of access to the second computer network for the user* [The limitation has been discussed with respect to preceding claims 1-23].

With respect to **claim 26**, Amin2 teaches the apparatus, *in response to registration of a new user, is operative to modify the configuration of the network control device to allow access to the second computer network for the new user*. See from line 53, column 15 to line 10, column 16 for path selection when a “new” user is “registered.”

With respect to **claim 27**, a system facilitating the deployment of volume-based network policies across a first computer network, comprising

*a bandwidth management device operably connected to a communication path between the first computer network and a second computer network, wherein the bandwidth management device is operative to* [Baugher shows the bandwidth manager, see lines 46-65, column 8, Baugher. Amin shows the core network service provided between the first and the network. See RAN between the Internet and the user, in Fig. 2]:

*monitor the volume of network traffic generated by individual hosts on the first computer network* [See lines 47-51, column 5 for “Throughput” in Baugher], and  
*enforce bandwidth utilization controls associated with individual hosts on data flows generated by the respective individual hosts* [See from line 47, column 7 to line 6, column 8, Baugher. It addresses changing the bandwidth (“characteristic associated with the network access”) at a node, in order to “enforce” the service characteristics];  
a user management server operative to:

*detect a network utilization milestone based on the volume of network traffic associated with an individual host* [See from line 47, column 7 to line 6, column 8 in Bauer for accessing MIB, which results in the notification of a process of reaching a THRESHOLD] and,  
*in response to a network utilization milestone, change the configuration of the bandwidth management device to associate bandwidth utilization controls corresponding to the milestone with the individual host* [See from line 47, column 7 to line 6, column 8, Baugher. It addresses changing the bandwidth (“characteristic associated with the network access”) at a node, in order to “enforce” the service characteristics].

With respect to **claim 28**, Amin shows *wherein the bandwidth management device is operative to redirect data flows generated by unknown hosts on the first computer network to the user management server* [In Amin2, note that the initial configuration of the system is such that the network traffic is routed to the user management server (or access function). See lines 36, column 15 to lines 2, column 16, Amin2] and

*wherein user management server is operative to register unknown hosts and change the configuration of the bandwidth management device to associate the host with bandwidth utilization controls operative to permit access to the second network* [See from line 57, column 15 to line 2, column 16, Amin2. Amin2 describes traffic path redirection (connection manager, part of bandwidth manager in the combination) upon being granted access by “access function.” The access function (user management server) is part of Baugher and Amin combination].

With respect to **claim 29**, Baugher shows *the controls associated with the milestone are operative to deny access*, as already discussed in claim 4. Baugher does not show denying access to the second network. However, Amin does show the second network (“Internet”) in Fig. 2.

With respect to **claim 30**, Baugher shows *the bandwidth utilization controls associated with the milestone are operative to degrade*, as discussed in claim 3. Baugher does not show degrading the access to the second computer network. However, Amin shows the second network (“Internet”) in Fig. 2.

With respect to **claim 31**, Baugher and Amin show the following limitations:

*wherein the bandwidth management device is further operative to identify network traffic types associated with data flows traversing the device* [See paragraphs 0153-0154, Amin. NGN accounting management architecture has UAEs and SAEs to capture usage data for each type. In view of of Amin and Baugher, “the bandwidth management device” would refer to the

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combination of Amin's traffic monitoring function and Baugher accounting management's function for establishing UAEs and SAEs] and

*wherein the user management server is operative to configure bandwidth utilization controls applicable to traffic types identified by the bandwidth management device.* [Amin shows that different categories of QoS that can be changed in paragraphs 0153 and 0154. In view of Amin and Baugher, the "user management server" would refer to the combination of Amin's traffic shaping function and Baugher's QoS changing function].

**Claim 32** cites that *the bandwidth management device and the user management server reside on the same device.* The limitation is not shown in any of the references noted above. However, Baugher shows that the bandwidth manager or any of its functions can be implemented in software. See lines 11-30, column 3, Baugher.

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the bandwidth manager and user management server on the same device, depending on hardware scarcity, because the user management server and the bandwidth manager can both be implemented in software as explained in the preceding paragraph and in Baugher. Note that one of the key advantages of implementing network component in software is that such design allows the designer to optimize network throughput given hardware availability, by grouping software servers on designated machines.

5. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baugher and Amin as applied to claim 25 above, and further in view of Makuck

With respect to **claim 25**, Baughes and Amin do not show *comprising a user interface module operative to register new users and create corresponding user accounts in the user account database*. However, Makuck meets the limitation in paragraphs 0149-0151 and Fig. 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a user interface as cited in Makuck for creating new user account, because the combination of Baughes and Amin would not be able to create with new user account and thus service new users. The creation of new user accounts must occur prior to servicing users; otherwise, there would not be able to service users based on QoS.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Barna et al., which discloses "System and Method of Monitoring and Reporting Accounting data based on volume" (U.S. Pub. No. 2002/0046277).


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988. The examiner can normally be reached on Monday-Friday 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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